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To cite this article: Veerle Garrels (2017) Goal setting and planning for Norwegian students with and without intellectual disabilities: Wishing upon a star?, European Journal of Special Needs Education, 32:4, 493-507, DOI: [10.1080/08856257.2016.1261487](https://doi.org/10.1080/08856257.2016.1261487)

To link to this article: <https://doi.org/10.1080/08856257.2016.1261487>



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Published online: 04 Dec 2016.



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RESEARCH ARTICLE



Goal setting and planning for Norwegian students with and without intellectual disabilities: Wishing upon a star?

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ABSTRACT

Being able to set personal high-quality goals and having the skills to make plans for goal attainment are associated with higher performance, increased student involvement at school, and higher levels of self-determination. This study examines self-reported goals of 83 Norwegian elementary and lower secondary school students with and without intellectual disabilities. The study also looks into whether students feel that they learn goal setting and planning skills at school. Findings suggest that students are able to identify process and product goals for themselves. Most students set academic goals for themselves, followed by career goals and sports-related leisure time goals. No significant differences were found between typically developing students and students with intellectual disabilities. While roughly two-thirds of all students reported that they feel encouraged to set goals for themselves at school, almost 60% of all students expressed that they did not learn planning skills at school. This finding indicates the need to assist teachers with instructional materials for how to teach students these important skills for self-determination.

ARTICLE HISTORY

Received 30 August 2016
Accepted 26 October 2016

KEYWORDS

Goal setting; intellectual disability; self-determination; autonomous learning

Introduction

The French author Antoine de Saint Exupéry (1900–1944) allegedly said that ‘A goal without a plan is just a wish’. The phrase may have lost some of its original vigour due to a certain overuse on interior design frames, but the content has not expired. Goal setting and planning are considered essential skills for self-determination (Wehmeyer et al. 2007, 8), and being able to set goals and to plan for goal achievement is crucial for a person’s performance (Locke and Latham 2006). However, goal setting and planning are not innate qualities, but are instead skills that need to be learned. This study aims to investigate the goals that Norwegian elementary and lower secondary school students with and without intellectual disabilities set for themselves, and whether they feel that they learn the necessary skills to set goals and plan at school. Findings from the study may shed light on students’ goal setting and planning in today’s educational practice, and provide guidelines for future practice and research.

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Background

For students with disabilities, skills in goal setting and planning have been identified as component elements of self-determined behaviour, together with other proficiencies such as being able to express preferences, to make choices and to self-regulate (Wehmeyer et al. 2007, 8). Self-determination has been described by Shogren et al. (2015) as a 'dispositional characteristic manifested as acting as the causal agent in one's life. Self-determined *people* (i.e. causal agents) act in service to freely chosen goals. Self-determined actions function to enable a person to be the causal agent in his or her life'. Thus, knowing how to set goals and being able to choose goals freely are considered fundamental skills of self-determination, which in turn may be an important predictor for post-school outcomes for students with disabilities (Wehmeyer and Palmer 2003). For students with intellectual disabilities, research shows that goal setting has a positive impact on their academic performance (Copeland and Hughes 2002). Also, students with intellectual disabilities who took part in a goal-setting intervention identified several benefits for themselves, such as becoming more organised, experiencing less stress over school assignments, and feeling more confident (Wehmeyer et al. 2000). Figarola et al. (2008) found that goal setting, combined with the self-monitoring of progress, leads to improved math fact automaticity for elementary school students with mild intellectual disabilities. For persons with autism spectre disorders, research suggests that interventions which include a self-set goal component may improve independent functioning (Carr, Moore, and Anderson 2014). Coddling, Lewandowski, and Eckert (2005) further found that student-selected goals and performance feedback were effective in increasing math fluency in elementary school students with ADHD. Thus, there seems to be ample empirical evidence for the benefits of goal setting for students with disabilities. Providing students with opportunities to practice goal setting and to experience goal achievement may be important motivational elements for their academic and non-academic performance.

However, goal setting and planning are important skills not only for students with disabilities, but for all students. Developments in educational research and practice over the past decades have led to a paradigm shift from teacher-centred to student-centred learning (Moeller, Theiler, and Wu 2012). This new perspective on the student as an autonomous participant in her own learning process emphasises the role of self-regulated learning (Furtak and Kunter 2012). The teacher's main function is not only to deliver instructions and knowledge to the students, but also to guide them in their learning process (ibid.). For this student-centred learning process to be successful, students need to identify themselves as active learners in their own education (Coon and Walker 2013). Coon and Walker (2013) describe this active agency in the learning process as 'educational citizenship', which implies that students use self-determined actions in their learning process, and that they should have the right to exercise some authority over their educational goals. When students are allowed to take part in their own goal setting, this encourages learner autonomy and stimulates autonomous motivation (Moeller, Theiler, and Wu 2012). Students who get to work on intrinsic educational goals, i.e. goals that they have identified themselves and that they have a personal motivation for, may experience positive consequences at school, such as being more persistent in school work, seeking more challenging educational tasks, showing more creativity and experiencing higher levels of school satisfaction (Guay, Ratelle, and Chanal 2008). Active student engagement throughout the learning process and autonomous

goal setting can also lead to higher achievement and higher levels of self-efficacy and self-regulation (Furtak and Kunter 2012; Moeller, Theiler, and Wu 2012). When students are successful in achieving their goals, this in turn may influence subsequent goal setting, as students continue to set higher goals for themselves, thus resulting in a positive upward spiral of continuous higher performance (Gross et al. 2014; Taing et al. 2013). Stevenson (2015) found that the implementation of a goal-setting intervention was closely related with increased time-on-task behaviour and reduced latency to task engagement for students with reading difficulties, thus enhancing academic engagement and student achievement. Graham et al. (1992) also reported evidence of the benefits of goal setting on the writing skills of students with learning disabilities, as the awareness of goals mobilises students' efforts and motivates the use of successful strategies to achieve the target goals.

Autonomy in the learning process develops largely through practice and feedback from teachers. Students need to be taught the necessary learning strategies and how to use these to become active and agentic learners (Moeller, Theiler, and Wu 2012). Copeland and Hughes (2002) also found that more frequent training in goal setting may lead to stronger effects on task performance; hence, providing students with opportunities to set goals for themselves may improve academic outcomes. The quality framework of the Norwegian National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training (Department of Education 2006) emphasises this need to facilitate pupil participation in education and to teach students the strategies that will prepare them for future democratic decision-making processes. The framework states that students should be provided opportunity to actively cooperate in their learning process, e.g. by choosing tasks and by taking part in decisions regarding their own learning. This implies that students should be allowed and be enabled to participate in planning, carrying out and assessing their education. This applies also to students with special needs (Department of Education 2006).

Goal-setting theory

In their goal-setting theory, Locke and Latham (2006) describe the setting of goals as a discrepancy-creating process. Goals create a constructive mismatch between present performance and the goal that one wishes to achieve, thus mobilising a person's effort to bridge the gap between the person's current state and what he or she wants to be doing in the future (Latham and Locke 2006). Latham and Locke (2013) describe life itself as a process of goal-produced action: goals are the primary source of a person's motivation, and the discrepancies that these goals form are created volitionally. Goal-directed action is an essential aspect of human life, and setting goals provides people with a sense of purpose (Locke and Latham 2006). In social cognitive theory, Bandura (2013) sees goal setting and goal attainment as dual control systems for the regulation of motivation and action: proactive discrepancy production, i.e. setting a goal, operates in concord with reactive discrepancy reduction, i.e. directing behaviour in order to attain that goal.

Goal-setting theory is built on two core empirical findings: (1) there is a linear relationship between goal difficulty and performance, i.e. more difficult goals lead to higher performance, at least until the limit of ability is reached, and (2) difficult goals lead to higher performance than no goals and vague or abstract goals, such as 'to do one's best' (Latham and Locke 2013). One of the hypothesised mechanisms behind these findings is that goals direct attention and encourage behaviour that is likely to lead to goal attainment, and this happens at the

expense of non-relevant behaviour (Locke and Latham 2006). Latham and Locke (2013) state that goals encourage persistence, especially in the case of difficult goals, and people tend to spend more time working on higher goals than on vague or easy goals.

Goal characteristics

Goals may be organised according to different characteristics, such as goal category, goal source and goal content. Goal categories are commonly divided into product goals, which identify an end result, and process goals, which describe actions that can lead to the attainment of product goals (Locke and Latham 2013). In a meta-analysis of studies on process goals, Seijts, Latham, and Woodwork (2013) found that individuals generally perform better with process goals than with product goals. This seems especially the case when individuals have not yet acquired the knowledge or skills to perform a task effectively, as process goals direct attention on how to obtain the necessary skills rather than focusing on the outcome itself. Process goals tend to increase self-efficacy and self-regulation, and they may create tolerance for negative feedback, which in turn may improve task performance (Seijts, Latham, and Woodwork 2013). Zimmerman and Kitsantas (1997) found that a premature focus on product goals may lead to lower levels of self-efficacy and intrinsic interest, while process goals tend to increase mastery. Locke and Latham (2013) argue that product and process goals may work best combined. It may be important to notice here, however, that when setting goals, younger students are more likely to describe product goals, and without adult prompting, students may not be able to set process goals (Sands and Doll 2000). Students may, for example, be likely to set a product goal such as 'getting better grades', but they may encounter difficulties identifying the necessary strategies to achieve that goal.

Another important trait of goals is their source of origin. Goals may be self-set, set in cooperation with others, or they may be assigned by others. Research shows that all these goal sources are effective for improving performance (Locke and Latham 2013). Codding, Lewandowski, and Eckert (2005) found evidence that students benefit from the self-selecting of goals as opposed to being assigned a goal by others, but other researchers (e.g. Gross et al. 2014; Swain 2005) argue that younger students may not have adequate experience with self-selecting realistic goals, and that they are likely to need ongoing training in this. As such, the type and quality of the goal may be of more crucial importance than the source of the goal. However, while the source of a goal may not influence performance drastically, it may play an important role in the self-regulation and self-determination of students. After all, a central element in being self-determined is being able to act upon *self-chosen* goals (Shogren et al. 2015). Apart from increasing students' sense of agency, participation in the goal-setting process may also enhance students' self-motivation (Guay, Ratelle, and Chanal 2008). Possibly, students may deem self-chosen goals more important than goals that are imposed upon them, and the attainment of self-chosen goals may then lead to higher levels of subjective well-being. For students who lack experience in setting goals for themselves, a possible alternative may be 'guided goal setting', where students can choose a goal from a preset list of possible goals, thus allowing a certain degree of choice and participation (Locke and Latham 2013; Shilts, Horowitz, and Townsend 2004).

The meaning of goal content seems to have received less attention in research than goal category and goal source. However, goal content does matter, as students seem to make significantly more progress on goals that are intrinsic in their aspirational content

(Hope et al. 2015). Personal, intrinsic goals seem to function as natural reinforcers, and are associated with greater positive affect (Hope et al. 2015). Fryer, Ginns, and Walker (2014) also found evidence that externally regulated goals, such as school grades, seem to have low impact on motivation and learning, whereas internally regulated goals may have a positive effect on student motivation. Indeed, even though externally regulated goals may be self-chosen, they may not be perceived as personal goals, and they may not have the person's complete commitment as internally regulated goals do (Sheldon 2002). On the other hand, goals that have an intrinsic content are usually pursued for self-concordant reasons, making goal attainment more likely (Sheldon 2002). Within school contexts, Bong (2001) argues that students may be more likely to phrase goal contents that reflect areas in which they feel confident in their abilities. Thus, goal content may be the result of interplay between personal interests and personal expectations of success.

Purpose of the study

The aim of this study is to gain insight in the nature of goals that students with and without intellectual disabilities set for themselves. The theoretical framework highlights the benefits of process goals, and it may be of interest to examine whether students mostly identify process or product goals. Further, an analysis of the goal content may provide information about the areas in which students feel that they can influence their performance and where they experience self-determination. The study also wishes to investigate whether students learn goal-setting and planning skills at school. Finally, the study examines whether there are significant differences between typically developing students and students with intellectual disabilities in the nature of the goals that they set and the extent to which they learn goal setting and planning at school.

The following research questions are addressed in this study:

- (1) Which goal content and goal category do students identify most frequently?
- (2) Are there any significant differences in goal content and goal category between students with and without intellectual disabilities?
- (3) Do students feel that they learn goal-setting and planning skills at school?
- (4) Are there any significant differences between students with and without intellectual disabilities in learning goal-setting and planning skills at school?

To provide answers to these research questions, students were asked to fill out a measure for self-determination that focuses on goal setting and planning. The results from the study may offer useful information for educators and provide guidelines for future practice.

Method

Participants

Eighty-three elementary and lower secondary school students (39 boys) aged 9–17 ($M = 12.69$, $SD = 1.58$) were recruited from 11 schools in Eastern Norway as part of a larger study investigating self-determination skills of elementary and lower secondary school students. Consent for participation in the study was obtained from the students' parents and from the students themselves. Sixty-five per cent ($n = 54$) of the students were typically

developing and received their education in mainstream settings. Thirty-five per cent ($n = 29$) of the students were identified by their teachers as having mild intellectual disabilities, and they received their education in special education classrooms, i.e. a segregated educational setting.

Even though the Norwegian Education Act of 1975 favours inclusion of all pupils in mainstream settings, research indicates a trend towards segregation within mainstream schools, especially for children with intellectual disabilities for whom individually adapted education within the regular classroom is not a sufficient facilitation (Wendelborg and Tøssebro 2008). This segregated educational setting was also found for all intellectually disabled participants in this study, as they were taught in special classrooms within regular local schools. This educational setting is characterised by a high teacher–student coverage, where the special educator has the main responsibility for a small number of students, and is assisted by paraprofessionals. Students from different grade levels are often placed together within the same classroom, based on their level of functioning rather than on their biological age. All students in the special education classrooms have individual educational plans (IEPs), which specify their educational goals for the academic year.

Instruments

For this study, all students completed the AIR-S-NOR, i.e. the cross-culturally adapted version of the American Institute for Research (AIR) Self-Determination Scale (Garrels and Granlund *forthcoming*; Wolman et al. 1994). The AIR-S-NOR consists of 21 items, and it assesses students' capacity and opportunity for self-determined behaviour by means of three indexes: 'What I do', 'How I feel' and 'What happens at school'. Response alternatives range from 'never' to 'always' on a four-point Likert scale. The questionnaire also includes three open-ended questions, asking students about a goal that they are currently working on, what they are doing to achieve their goal, and how well they are doing in attaining that goal. In this study, answers from the open-ended question about which goal the student is working on, as well as the answers to two of the questions from the 'What happens at school'-index form the data basis for analysis. The typically developing students completed the AIR-S-NOR in their classrooms under guidance of the researcher, while the students with intellectual disabilities answered all the questions in a one-to-one interview with the researcher.

Procedure

A qualitative analysis of the goal content was performed following the steps for qualitative content analysis described by Zhang and Wildemuth (2009). Goals identified by the students in the open-ended questions of the AIR-S-NOR were entered verbatim into a Microsoft Word table for coding purposes. A coding key was used, so that no identifying information was included in this table. Although students were asked to name only one goal in the questionnaire, several students identified multiple goals. As those students did not rank their goals in a specific order of importance, all goals were maintained, thus leading to a total of 112 goals for 83 students. After preparing the data, the students' goals were first sorted into several categories following the coding scheme from a similar study on goal content analysis for middle and high school students with disabilities by Williams-Diehm et al. (2010). Then a further refinement of the categories was performed, as a large number

Table 1. Coding scheme for goal analysis.

Coding number	Coding description
<i>Goal content</i>	
0	No goal
1	Academic goal (includes goals related to specific school subjects, tests, work completion)
2	Classroom management goal (includes goals such as following classroom rules, being concentrated at school and paying attention)
3	Sports-related leisure time goal (includes goals related to after-school sports activities, participation in sports clubs, individual sports goals)
4	Other than sports-related leisure time goal (includes goals related to after-school activities such as music school, activities at home, etc.)
5	Social goals (includes goals related to interaction with peers or adults)
6	Career goals (includes goals for future employment, university choices, etc.)
<i>Goal category</i>	
0	No goal
1	Product goal (i.e. goals that define a certain outcome, such as joining a sports team, earning certain grades, etc.)
2	Process goal (i.e. actions that help in the achievement of a certain goal)

of students specifically identified sports-related goals, a category which was not present in the study by Williams-Diehm et al. (2010). This generated an initial list of eight coding categories for goal content: (a) social goal, (b) academic goal, (c) long-term goal for academics, (d) sports-related leisure time goal, (e) other than sports-related leisure time goal, (f) classroom management goal, (g) long-term goal for non-academics and (h) no goal. Goals were also coded according to being product or process goals. To validate this coding scheme, 25% of the goals were rated independently by two researchers to check for inter-rater reliability. As a result, the original codes for the content areas 'academic goal' and 'long-term academic goal' were merged into one single category of 'academic goals', as many of the students' answers were not specific enough to reliably define them as either one or the other, and the category 'long-term goal for non-academics' was renamed 'career goal' (Table 1). After this adjustment, inter-rater agreement was assessed for both goal content and goal category using Kappa Measure of Agreement. A Kappa of .5 indicates moderate agreement, and a value above .7 represents very good agreement (Pallant 2013). The resulting inter-rater reliability for goal content was calculated to a Kappa Measure of Agreement value of .908, and for goal category the value was .857. These values indicate excellent inter-rater reliability. After this level of consistency was achieved, the remaining goals were coded into the final categories.

Analysis

Following the process of qualitative content analysis, data were further analysed quantitatively. All goal analysis codes were entered into SPSS version 22, together with additional data such as age, developmental characteristics and the students' Likert scale answers to the items from the AIR-S-NOR that asked about their opportunities at school for setting goals and making plans ('People at school encourage me to set my own goals to get what I want or need' and 'At school, I have learned how to make plans to meet my goals'). Using the coding key in this process allowed for matching student characteristics to the goal content and goal category codes, so that possible correlations between developmental characteristics, goal content and goal category could be examined. Descriptive statistics were used to describe

the sample and the frequency of the goal content, the goal category and the students' Likert scale answers to the goal setting and planning questions. Chi-square for independence was calculated to identify any significant differences between students' developmental characteristics and goal content and category. The non-parametric Mann–Whitney *U*-test was used to examine any possible differences between the answers that students with and without intellectual disabilities provided on the Likert scale questions.

Results

Research question 1: Which goal content and goal category do students identify most frequently?

Goal content analysis shows that, for all students combined, the goals that were reported most often were academic goals and career goals (frequency of 25% each), followed by sports-related leisure time goals (23%). To a lesser extent, students identified non-sports-related leisure time goals (10%), social goals (7%) and classroom management goals (5%).

Regarding goal category, students generally reported product goals more frequently than process goals (59% vs. 36% respectively). Sorted by goal content, process goals represented 66% of all academic goals, 83% of all classroom management goals, 48% of all sports-related leisure time goals and 18% of all social goals. All career goals that students identified for themselves were formulated as product goals, such as e.g. 'becoming a professional cross-country skier'.

Research question 2: Are there any significant differences in goal content and goal category between students with and without intellectual disabilities?

Descriptive data analysis shows that students with intellectual disabilities reported academic goals more often (34%) than their typically developing peers (20%). Career goals accounted for 32% of the goals set by students with intellectual disabilities, compared to 21% for typically developing students. Students with intellectual disabilities reported leisure time goals less frequently than typically developing students (25% vs. 38% respectively). None of the students with intellectual disabilities reported classroom management goals, while 8% of the goals reported by typically developing students belonged to this content category (Table 2). Although a frequency count shows certain differences in goal content for students with and without intellectual disabilities, a chi-square test for independence indicated no significant association between goal content and developmental characteristics, $\chi^2(6, n = 112) = 10.1, p = .12, \pi = .30$.

For goal category, students tended to focus mostly on product goals, with minimal differences between disability and typically developing student groups.

Research question 3: Do students feel that they learn how to set goals and make plans for goal attainment at school?

A frequency count of the students' answers to whether they feel encouraged to set goals for themselves at school, shows that 38% of all students never or rarely feel encouraged to

Table 2. Goal analysis.

	Total	Intellectual disability	Typically developing
<i>Goal content analysis</i>			
No goal	2	0	3
Academic goal	25	34	20
Classroom management goal	5	0	8
Leisure time goal sports-related	23	18	27
Leisure time goal non-sports-related	10	7	11
Social goal	7	9	6
Career goal	25	32	21
Missing data	3	0	4
<i>Goal category analysis</i>			
No goal	2	0	3
Product goal	59	66	55
Process goal	36	34	38
Missing data	3	0	4

Note: All numbers in percentage.

do so, while 62% of all students feel often or always encouraged. Thus, almost two-thirds of all students feel that they can engage actively in goal-setting processes at school.

To the question whether students feel that they learn how to make plans to help them achieve their goals, 57% of all students respond that they never or rarely learn this at school, while 43% of all students answer that they often or always do so.

Research question 4: Are there any significant differences between students with and without intellectual disabilities in learning goal-setting and planning skills at school?

A Mann–Whitney *U*-test revealed no significant difference in the opportunities to set goals at school for students with intellectual disabilities ($Md = 3, n = 26$) and typically developing students ($Md = 3, n = 54$), $U = 643, z = -.640, p = .522, r = .07$.

For the question on whether students learn how to make plans for goal attainment, the Mann–Whitney *U*-test showed no significant difference between typically developing students and students with intellectual disabilities, $U = 700, z = -.30, p = .76, r = .03$.

Although no significant differences were found between groups, a certain trend in the data might be identified: students with intellectual disabilities state slightly more often that they feel encouraged by their teachers to set goals for themselves, and they also report slightly more frequently that they learn how to make plans at school (Figures 1a and 1b).

Discussion

This study aimed to provide insight in the goal-setting behaviour of Norwegian elementary and lower secondary school students. Typically developing students and students with intellectual disability were asked to complete the AIR-S-NOR as a measure of self-determination levels. Data analysis in this study occurred on the basis of the instrument's open-ended question about a goal that the student was currently working on, as well as two Likert scale questions about opportunities for goal setting and planning at school.

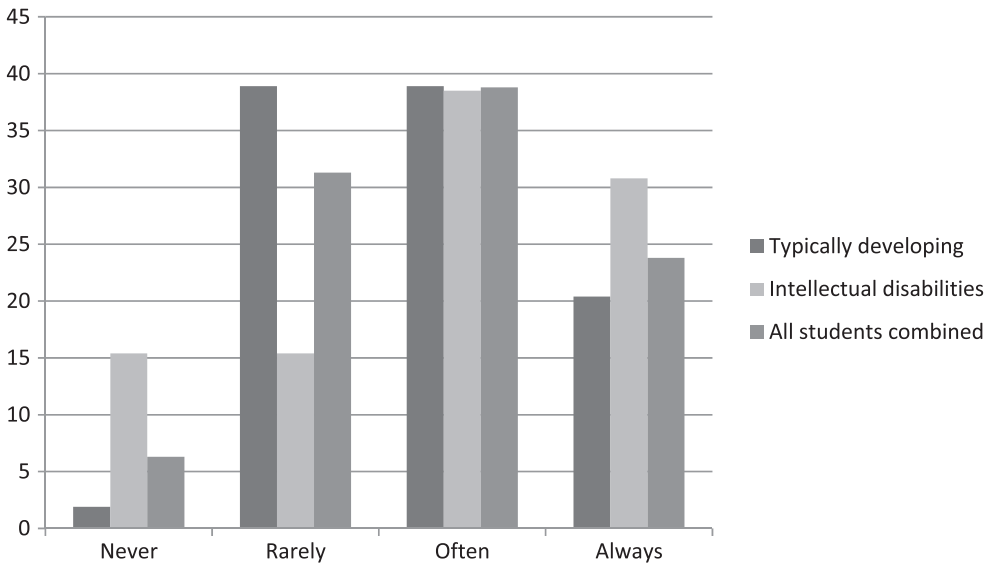


Figure 1a. Opportunities at school: Students feel encouraged at school to set goals for themselves. Note: Numbers are in percentage.

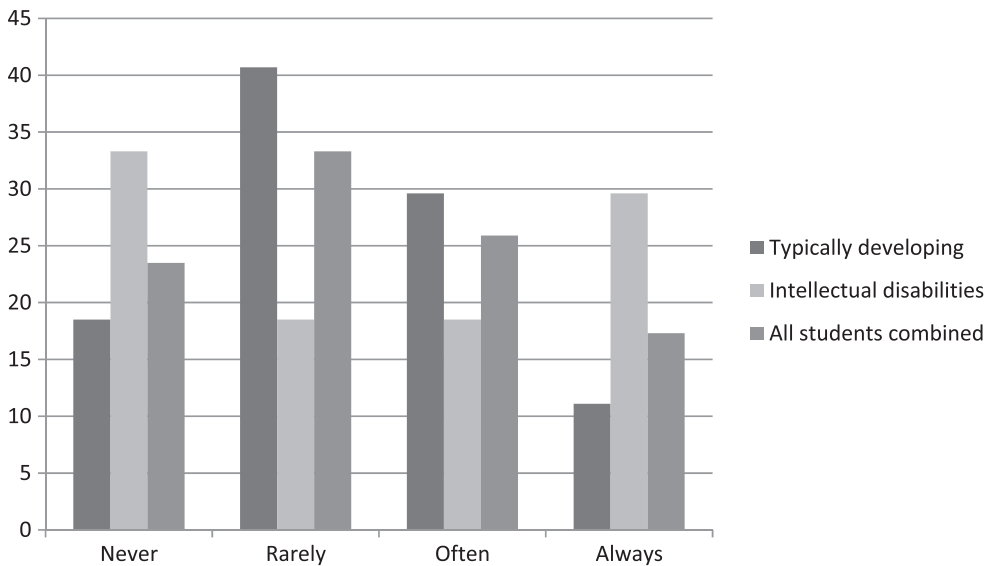


Figure 1b. Students feel that they learn how to make plans for goal attainment at school. Note: Numbers are in percentage.

Data analysis shows that, for all students combined, the reported goals comprised mostly academic goals, career goals and sports-related leisure time goals. Leisure time goals that were not sports-related, social goals and classroom management goals were reported less frequently by all students. The high prevalence of academic goals is consistent with findings

in previous research studies (e.g. Williams-Diehm et al. 2010), and highlights the perceived importance of school performance for elementary and lower secondary school students.

The generally high emphasis on sports-related leisure time goals for all participants may reflect a perception of the sports arena as a place for performance and achievement. In sports, students may experience a higher degree of autonomy and self-development, so that they feel more encouraged to set personal goals for themselves. As sports activities are largely voluntary, this may influence students' feelings of intrinsic and autonomous motivation for such activities.

No significant differences in goal content were identified between students with intellectual disabilities and typically developing students. A slight trend in the current dataset might seem to indicate that students with intellectual disabilities report academic goals and career goals more frequently than their non-disabled peers, while typically developing students may seem to focus more on goals that are not immediately school-related. Further research with larger samples and different methods of investigation is needed to explore these possible differences further.

Beside goal content analysis, goal category was also explored. Here, students reported product goals more often than process goals (59% vs. 36%), but this difference can mostly be explained because of all the career goals being formulated as product goals. For academic goals, about two-thirds of all goals were formulated as process goals, while about half of all sports-related leisure time goals were process goals. This indicates that students are capable of formulating high-quality goals for themselves, where they focus more on skills that they need to acquire to achieve a product goal, rather than on the product goal itself. This stands in contrast to the hypothesis posed by Sands and Doll (2000), stating that younger students would experience difficulties formulating process goals for themselves. A possible explanation for this may be the general focus in Norwegian education on learning goals rather than on product goals. For example, Norwegian elementary school students do not get grades on their academic schoolwork, thus redirecting attention towards learning goals rather than towards product goals. As such, being able to set learning goals may be the result of having had practice in doing so.

Despite students showing adequate goal-setting capacity, 4 out of 10 students state that they do not feel encouraged to set goals for themselves at school, and 6 out of 10 students report that they do not learn how to make plans to achieve their goals. This indicates a gap between school practice and the guidelines of the Norwegian Department of Education (2006), which state that students should be allowed to participate actively in their academic goal setting and planning. All students that participated in the study showed that they were able to identify goals for themselves, but with a majority of the students not learning how to make plans to reach their goals, one can ask whether these goals in many cases remain nothing more than wishes. Whether students attain their goals or not may be left to coincidences, as they do not learn the necessary skills that will help them in attaining their goals. Wehmeyer, Agran and Hughes (2000) found that teachers do not feel familiar with strategies for how to teach goal-setting and planning skills to their students, and that they lack the instructional materials to do so. This may be a possible explanation for the current study's findings as well.

Implications for future research

While this study looked into goal category, goal content and the extent to which students learn goal-setting and planning skills at school, the data are reported directly by the students and the source of the goals reported by students was not examined. Neither did the study investigate the students' underlying motivations for the goals that they had chosen. Both goal source and the motive for selected goals, i.e. whether the goal is in concordance with personal interests, values and needs, may play an important role in the students' perception of autonomy and self-determination. Therefore, further research is required here.

The present study operated with small groups of typically developing students and students with intellectual disabilities, and this may have contributed to finding no significant differences between the two groups. More research with bigger samples is needed in order to establish whether the findings in this study are representative of the larger population of students, or whether differences between groups do exist. An interesting research question that raises itself is whether the close teacher–student contact in special education allows for more involvement in the educational process of goal setting and planning than is the case in mainstream education, where teachers need to divide their attention over a larger number of students. Also, it is worthwhile to investigate how students with intellectual disability generalise the concept of goal-setting to activities outside of the school.

The findings in this study are solely based on students' self-reports. While it is important to investigate students' personal opinions and hear their perspectives, future research may include teachers' perceptions as well, in order to compare teacher and student reports, and to gain crucial insight in barriers that teachers face when it comes to teaching goal setting and planning. More extensive knowledge about this could help bridging the gap between theory and practice.

Implications for educators

Based on the findings from this study, the main implication for educational practice seems that teachers need to be provided with the necessary skills and tools to involve students in goal-setting and planning processes. While several educational programmes have been developed internationally for this purpose, none of these seem to be used systematically in Norway. It would therefore be advisable to make these programmes available in Norway as well, and evaluate their effect on both teacher and student behaviour. For educators, it is important to be aware of the significance for students of being involved and active agents in their own learning processes. Teaching students how to set goals for themselves and how to make plans for goal attainment may help them increase performance and experience a sense of well-being when goals are achieved. This goes for both students in mainstream education and for students in special educational settings.

Limitations

Certain limitations to this study should be taken into consideration. First, data from students with intellectual disabilities were collected by means of structured interviews, while typically developing students filled out the form by themselves in the classroom, under the guidance

of the researcher. These different *modi operandi* may have brought a social bias into the results of the students with intellectual disabilities.

Also, students were not chosen randomly for this study, but were instead selected by the schools that accepted to participate. Therefore, the representativeness of the participants is not known. Students with mild intellectual disabilities were identified by their special educators, without their disability being verified by medical reports.

The small sample size in this study limits results and their interpretations. More research with larger samples is recommended to provide results that are more than preliminary.

Conclusion

This study investigated the goals that Norwegian elementary and lower secondary school students with and without intellectual disabilities set for themselves. Goal content and goal category were analysed. The study also examined whether students feel that they learn goal-setting and planning skills at school. Goal content analysis shows that students mostly set academic goals, career goals and sports-related leisure time goals. No significant differences were found between typically developing students and students with intellectual disabilities when it comes to goal content. Both typically developing students and students with intellectual disabilities were able to formulate process goals, which are generally considered higher quality goals than product goals. While roughly two-thirds of all students feel encouraged by their teachers to set goals for themselves, around 57% of the students reported that they do not learn how to make plans for goal attainment at school. Thus, while most students seem to be skilled to set goals for themselves, they may lack the strategies to turn these goals into action plans. This indicates the need for teacher training to focus more on how to teach students the necessary skills for becoming autonomous learners and self-determined adults.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes on contributor

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